



HARVEST

AUTUMN
1916

SURGICAL

BULLETIN

The Lesson of the Harvest

THE Harvest Season brings a lesson for every one, a lesson of planning, of preparedness. The ultimate in preparedness is realized at the time of the harvest. The man who reaps the most bounteous harvest is the one who has planned most carefully; who is prepared to gather its fruits.

This lesson of preparedness should strike home with the deepest significance to every Doctor.

Are you prepared with proper equipment to take advantage of your opportunities and secure the results due you after years of study and research? Are you ready to give your patients that full measure of attention and service which they have a right to expect of you?

The many special offers and valuable suggestions on equipment, instruments and supplies that are to be found in this special bulletin should help you reach that degree of professional preparedness to which every physician and surgeon aspires.

QUALITY, assured by our record of 20 years of successful growth and our unconditional guarantee of absolute satisfaction,—**SERVICE**, possible only through a large organization such as ours with its enormous manufacturing facilities and two million dollars cash capital,—and **PRICE** which means the lowest possible manufacturing cost with only a single honest merchandising profit added,—these are the grounds on which we ask your patronage.

FRANK S. BETZ Co.

HAMMOND
CHICAGO SALES DEPARTMENT

INDIANA. U.S.A.
30 EAST RANDOLPH ST.

THIS INSTITUTION BEHIND THE BETZ GUARANTEE

CAPITAL

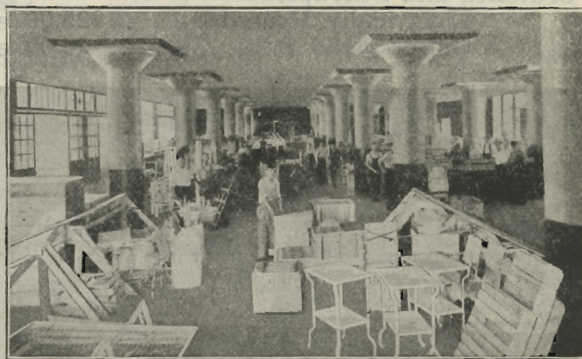
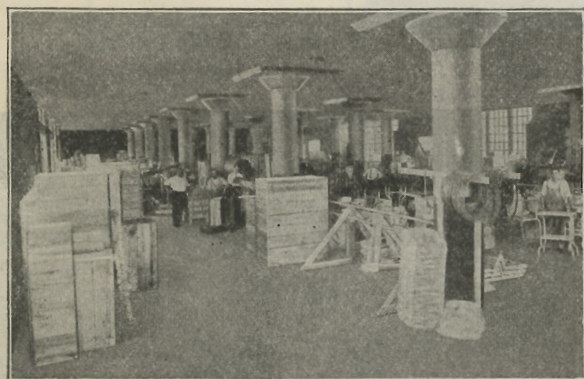
\$2,000,000.00

**THE BETZ
GUARANTEE**
UNCONDITIONAL SATIS-
FACTION GUARANTEED
OR MONEY
CHEERFULLY REFUNDED
FRANK S. BETZ Co



Where the Betz Company Started
in 1895

**Over Twenty Years of Wonderful Growth and
Substantial Success, and a Reputation of the
Highest Financial Integrity and Honest Deal-
ing, are behind our Unconditional Guarantee
of Complete Satisfaction.**



Two Pictures of our new fire-proof Shipping Room

The illustrations give you some idea of this room and the service possibilities it promises. The building is made of reinforced concrete and brick, and one entire floor is devoted to the shipping of orders. This is only one of many moves on our part to give you BETTER SERVICE.

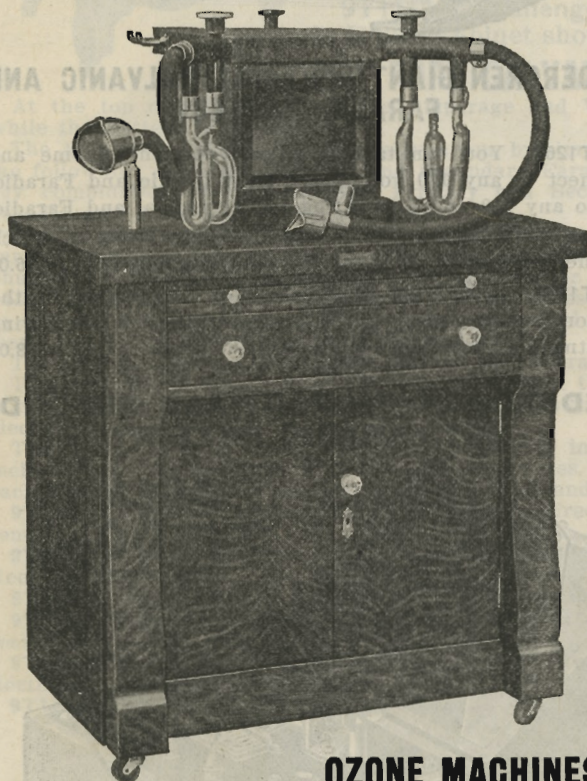
SINUSOIDAL APPARATUS

Latest and best Sinusoidal outfit offered the medical profession. Designed to be operated either from alternating or direct current, but be sure to specify at the time the order is placed. Delivers a smooth Galvanic current, also the Sine Waves and all the modalities known to the most modern methods. Gives the greatest range of interruptions. Variable speed from 6 cycles to 3500 cycles per minute. Equipped with Motor, Regulator, Equalizer, Switch, Pole Changer, Two-way Dead-Beat Milliamperemeter with 3 scales, Current Selector, Sine Wave Selector Switch, Graphite Rheostat Controller. The Motor Converter and Generator are wound on a single shaft and enclosed in a dustproof, metal case. The Generator works independent of the outside circuit, thus making it earth free with absolutely no chance for shock to the patient in case the circuit should be grounded as may happen to outfits built according to the old idea.

The Cabinet is 23 inches wide, 20 inches deep and 40 inches high over all. Made of quarter sawed oak and finished regularly in golden oak, but fumed and early English can be supplied when specified. Weighs 200 lbs., ready for shipment.

9T1135. For 110 volt direct current.....\$200.00

9T1136. For 110 volt alternating current..... 275.00

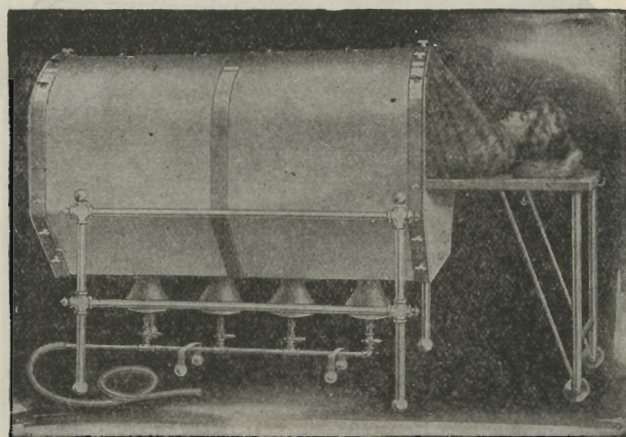
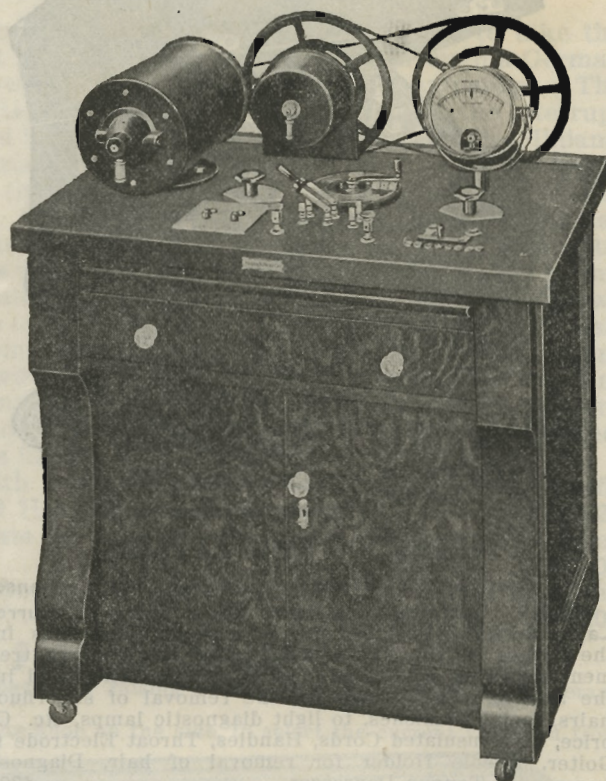


OZONE MACHINES

At one of the Philadelphia experimental stations, where Ozone is used in treating water, they reported that in samples polluted with as many as 720,000 bacteria to the C. M., after treatment only 16 remained. Another test with over 700,000 showed absolute destruction. There are many kinds of apparatus in the market for generating Ozone. We have tried to examine them all, not only in this country, but abroad, and it is our aim to offer an outfit that we feel is the best, and concerning which we can conscientiously say: "Try it thirty days, and if it satisfies you, keep it, and if not, send it back." Our new Pump will force the Ozone through 16 inches of Pine Needle and Eucalyptus Oil, making a perfect nebula.

9T960. Portable Ozone Machine.....\$ 35.00

9T961. Two Patient Ozone Machine..... 165.00



BODY HOT AIR APPARATUS

8T870. It occupies 4x8 feet. The patient rests on a car which can be rolled into the apparatus to any desired distance. When rolled out the car makes a practical massage table. The apparatus is finished in aluminum bronze, except the railings which are made of polished brass, nickel plated. Weight ready for shipment 500 lbs. We send it complete with gas, gasoline, rubber air pillow for car, 2 robes 60 inches long, 2 Turkish blankets, 54x72, mitts, stockings and fifty feet of heavy Turkish toweling. If you have worked for years and worked hard and you are now interested in the cure of chronic diseases, write for price and send a list of such an outfit as you would like to have a quotation on.....\$ 75.00

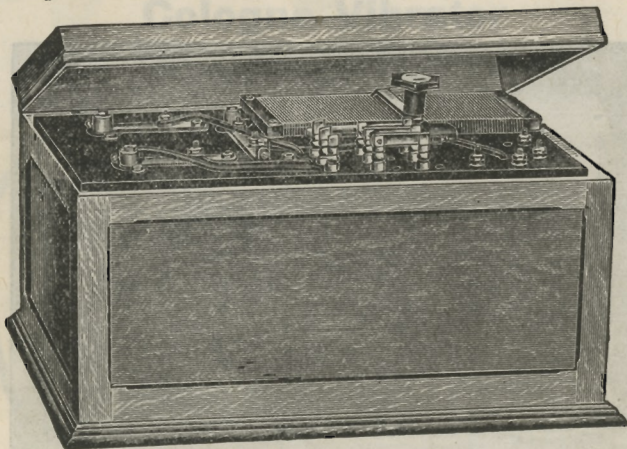
Electric Heaters 120.00



GRANGER'S IONIC BATTERY

With Rectifier, Transformer, Controller and Condenser

9T1240. Operates only from the Alternating Current Lamp Socket. Designed for introducing medicines into the tissues for the treatment of goiter, etc., or any treatment requiring medicated solutions to be introduced into the system. Suited also for the removal of superfluous hairs, facial blemishes, to light diagnostic lamps, etc. Our price, with insulated Cords, Handles, Throat Electrode for Goiter, Needle Holder for removal of hair, Diagnostic Lamp with Tongue Depressor.....\$30.00



CURRENT RECTIFIER

The only Outfit made which will transform 110 volt Alternating Current into a SMOOTH 110 volt direct current without loss for operating Galvanic Batteries, etc. Should the voltage be 220, it must be reduced to 110 volts by using our 9T2881 reducing plate.

The Condenser contains 832 feet of Tin Foil and 300 feet of Condensing Paper.

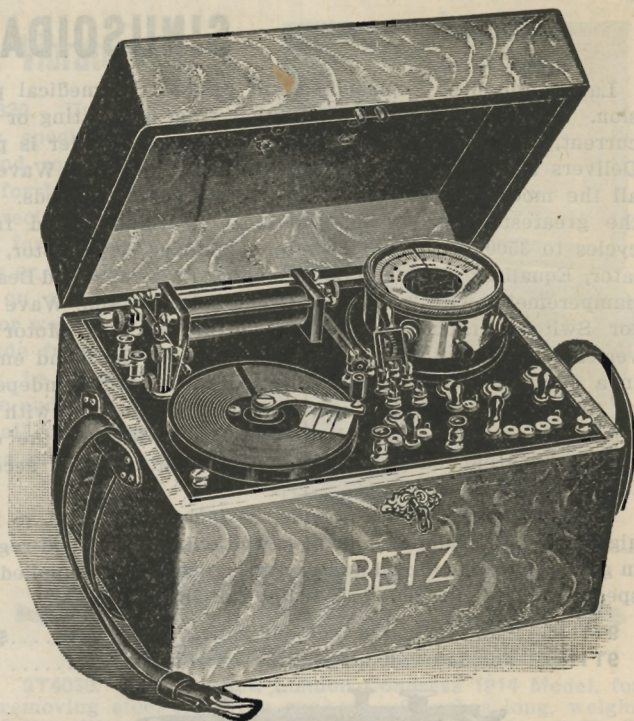
The Alternating must be transformed into Direct Current for operating Galvanic Batteries because the Polarity reverses while the Direct has Permanent polarity.

The knife switch can be thrown to another set of posts allowing the Alternating Current to pass direct from the line to the Galvanic side of the battery for giving the Sinusoidal Current or operating the Faradic.

Heretofore all Rectifiers were made without Condensers or Controllers and would deliver only a sharp, uneven Direct Current, which could not be used successfully for internal or delicate work.

9T1355. Combination Rectifier in box.....\$16.50

9T1356. Same, in Beautiful Oak Cabinet..... 18.50



CEDERGREN GIANT PORTABLE GALVANIC AND FARADIC BATTERY

9T1268. You can take it to your patient's home and connect to any 110 volt direct for Galvanic and Faradic, or to any 110 volt alternating for Sinusoidal and Faradic.

Case will hold 48 cells. Price, complete, ready to attach to the Alternating or Direct Current Lamp Socket...\$36.00

9T1263. With a set of 48 cells (No. 4 Columbia) in the bottom of the case. Wired up ready for use for giving treatments where there is no electric current.....\$48.00

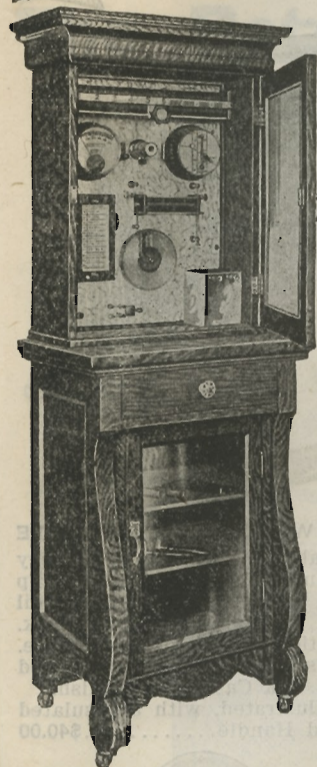
CEDERGREN PRIMARY AND SECONDARY FARADIC BATTERY

**ONLY
\$5⁰⁰**



9T1265. Over 15,000 in use—guaranteed equal to any \$12.00 Faradic Battery on the market and superior to some at \$20.00. Our price only.....\$5.00

CHALLENGE GALVANIC FARADIC, SINUSOIDAL AND CAUTERY BATTERY



This outfit consists of a Switch Board, which is so designed as to take the electrical current from 110 volt alternating current, passing through a German silver Regulator, which cuts down your current to the correct amperage. The Plate itself has an Automatic Rheotome, allowing you to regulate the Interruption of the Galvanic, Faradic and Sinusoidal Cautery. The two scale Milliamperemeter measures the galvanic current. The Automatic Current Selector allows you, by simply turning the knob in the Current Selector, to select the following currents: Galvanic, Primary and Secondary Faradic, or a combination of Galvanic and Primary and Secondary Faradic and Sinusoidal currents. The Graphite Rheostat controls the amount of current delivered to the patient. A pole Changer Switch is mounted in the bottom of the Cabinet, which allows you to change at the will of the operator the polarity of the current. The Challenge Floor Battery is a handsome quartered Oak Colonial design Cabinet, finished regularly in Golden Oak with \$25.00 Rectifier, Transformer and Condenser for transforming the alternating current into a smooth direct current which allows you to treat those diseases or conditions where Galvanized, Faradic current or Sinusoidal is indicated.

9T1112. Price complete, with Cords, Handles, Foot Plate, Cautery Outfit with Handle, Three Knives and Heavy Cords \$88.20

9T1110. Challenge Wall Plate in Cabinet shown as above, but without Floor Stand \$81.00

9T1111. Challenge Switch Board Complete with all Accessories mounted in Roller Cabinet shown below \$87.00

THE POPE GALVANIC AND FARADIC BATTERY

At the top of the Battery is the Amperage and Voltage Regulator for raising or lowering the Voltage or Amperage while the Battery is in use.

The Automatic Current Selector allows you, by simply turning the knob on the side, to select the current you wish from the following: Galvanic, Primary and Secondary Faradic, or any combination of Galvanic and Primary and Secondary Faradic, and Sinusoidal Currents.

The Rheotome at the upper right hand corner breaks the current from 8 to 600 per minute. The long and short Scale Shunt Milliamperemeter at the upper left hand corner is 0-50, 0-500. You cannot buy a better battery at an honest price as long as competitors must divide with agents and instrument dealers on everything they make and sell.

The Coil has double singing and ribbon Ball Vibrator.

There are no switches except the Pole Changer at the bottom of the Cabinet for throwing positive or negative to either electrode.

The Marble Slab is 18x24 inches. The Cabinet in 22x37 inches with door and drawer for holding electrodes. With each Battery we send Cords, Handles, Foot Plate and Lock.

9T1125. Pope Battery in Wall Cabinet, for direct current \$54.00

9T1125A. Same, for alternating current with necessary Rectifier \$72.00

9T1125B. Same, with 40 Dry Cells \$62.70

9T1126. Pope Battery in Roller Cabinet, for direct current \$60.00

9T1126A. Same, for alternating current with necessary Rectifier 78.00

9T1126B. Same, with 40 Dry Cells 69.70

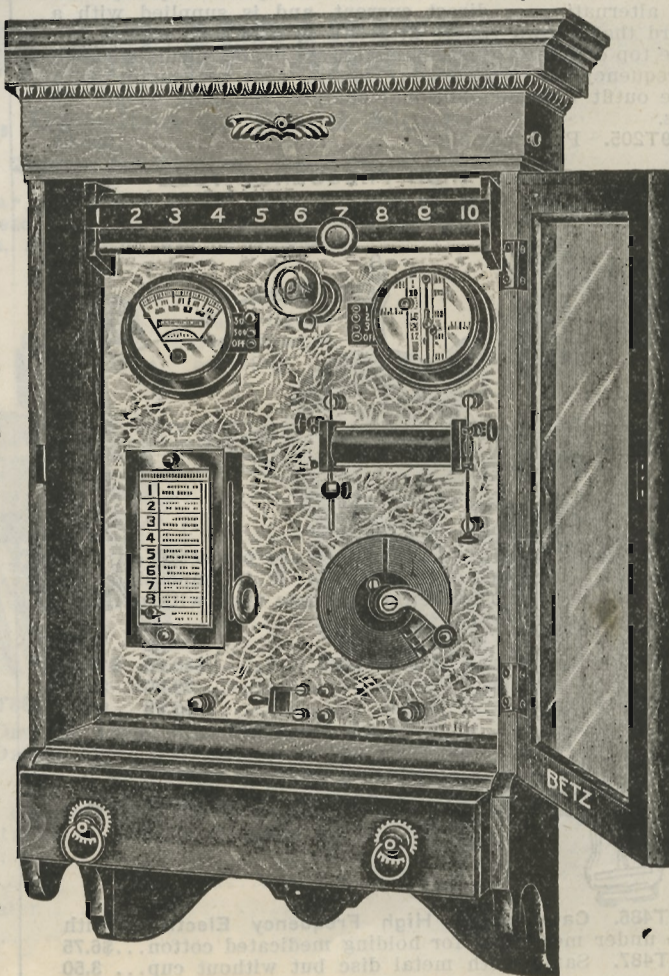
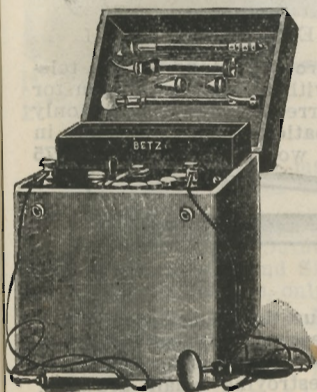
WILSON GALVANIC BATTERY

Complete with small Eye Magnet, Lamp for Rectal, Vaginal and Throat work, Tongue Depressor, Cords, Handles, Needle Holder and one-half dozen Needles for the removal of hair, warts, moles and treating facial blemishes. Not sold for the treatment of patients, or for cautery or other heavy work.

The Eye Magnet is the same as sold by others for \$7.50.

9T1283. With cells ready for work \$12.50

9T1384. New set of 9 cells 2.25



KILO-AMP COIL No. 1

**A POWERFUL 2½ K. W.
APPARATUS DESIGNED
EXCLUSIVELY FOR
X-RAY WORK**

It is encased in a beautiful cabinet, 20x23 inches square and 34 inches high. A powerful, 2½ K. W. transformer, in connection with the other apparatus encased with the machine, enables the operator to radiograph any part of the body in 20 seconds, without the aid of an intensifying screen. This is a remarkable statement, considering the fact that the most powerful outfit of similar type that the market affords, consumes almost 4 K. W. and requires 30 seconds to take a hip picture. This means that the Kilo-Amp. No. 1 requires 35% less current to do 33% more work.

Its speed is ideal for general fracture, foreign body and dental work; and the ease with which it may be manipulated makes it especially suited to the inexperienced operator; only one regulator to adjust, and after once being set for the kind of work that it is desired to do, it need never to be touched. Therefore, radiography with Kilo-Amp No. 1 resolves itself into the simple formula of placing the tube in position and throwing in the switch for the required number of seconds. What could be easier?

We offer you this powerful X-Ray Apparatus, without accessories, for \$150.00—a little more than half the price asked by other firms for outfits of inferior quality and power. Let us send it to you for 30 days' trial; if you are not fully satisfied, return the outfit and your money will be refunded.

9T190. Kilo-Amp. No. 1..... **\$150⁰⁰**
When ordering state voltage and kind of current.



KILO-AMP COIL No. 6

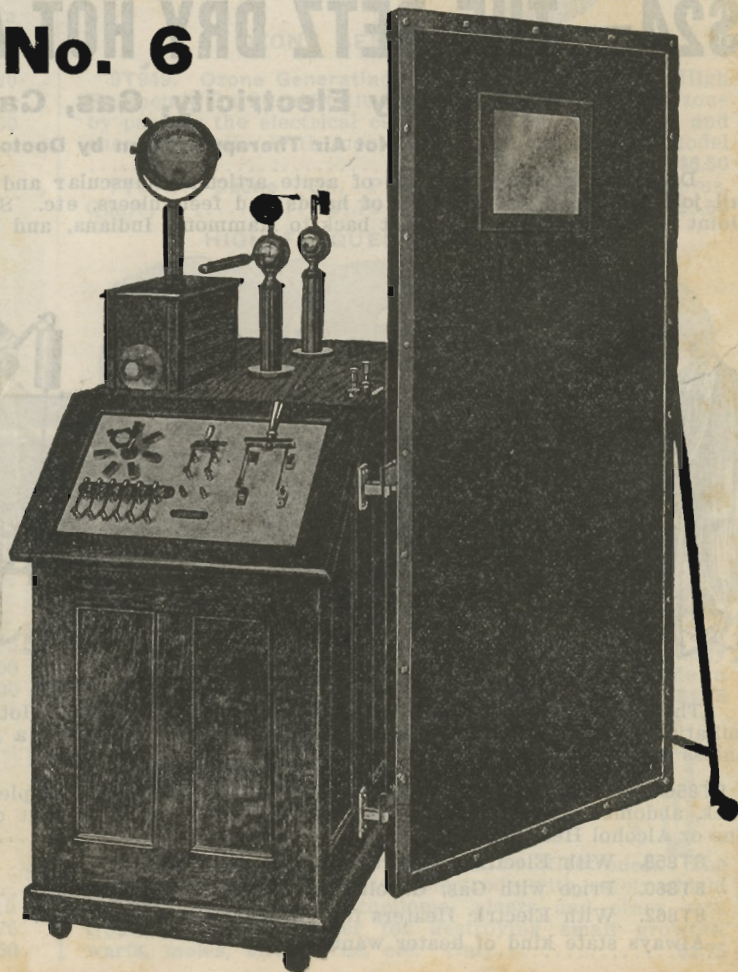
**NEXT IN POWER TO THE
INTERRUPTERLESS**

Kilo-Amp No. 6 was designed for the average practitioner who wants to do first-class X-Ray work with a reasonable degree of speed, yet who hasn't \$600.00 or \$800.00 to invest in such an apparatus. Our No. 6 cannot be excelled for X-Ray work. The flexibility of the control is unsurpassed. By properly manipulating the three regulators an infinite number of variations in current strength are obtained, ranging from the lightest glass, vacuum electrode treatment to the heaviest radiography.

This heavy outfit will radiograph any part of the body in 10 seconds, making an ideal X-Ray Apparatus for any kind of work, except pictures of the stomach, which, of course, require an instantaneous exposure. It is equipped with D'Arsonval Transformer that will pass 2,000 milliamperes through the patient. It is mounted in a quartered sawed oak cabinet, occupying a floor space of 24x40 inches. Shipping weight 750 lbs., including accessories. With this outfit we include one High Frequency Tube; one Adjustable Tube Stand, that others bill for \$100.00; one Safety Lead Protecting Screen, with lead glass window, sold for \$45.00; one Hot Wire Milliamperemeter, for measuring the current used for High Frequency, or Auto-Condensation treatments; one set of Electrodes, complete with all High Frequency electrodes, handles, cords and accessories, making an outfit complete in every detail and ready to attach to the main wires of any alternating current.

9T220. Complete with all
Accessories, herewith listed..... **\$375⁰⁰**

When ordering, state voltage and kind of current.



KILO-AMP X-RAY AND HIGH FREQUENCY COIL

We guarantee this to be the most powerful Suit Case X-Ray Coil ever made. It is excelled only by our Kilo-Amp No. 2, described below.

Kilo-Amp construction is used throughout, which means that you are getting a coil that is correct from the standpoint of both electrical engineer and electro-therapist; a coil in which the best materials and best workmanship are used.

This wonderful apparatus delivers all the treatment currents and is provided with a powerful X-Ray unit; it will radiograph any part of the body in 60 seconds, or less—something that has hitherto been considered impossible with a suit case X-Ray apparatus.

This outfit is so completely under the control of the operator that, it is possible and at the same time practical to get a Diagnostic Lamp Current, Cautery Current, D'Arsonval Current, Thermo-Faradic Current and Low Potential Sinusoidal. This powerful outfit is mounted in a highly polished, quartered oak case, 25x14x7—it comes complete with tube-holder, a number of electrodes and all necessary cords. Write for special circular.



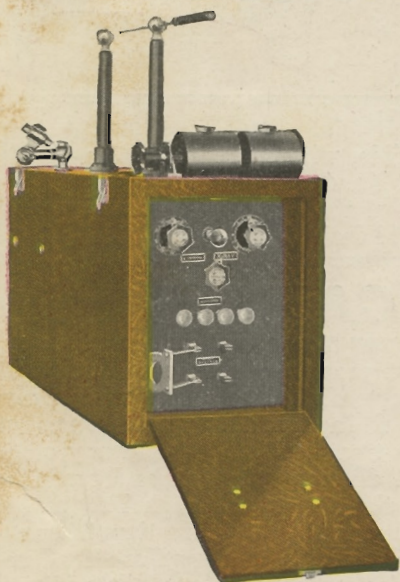
SUIT CASE TYPE

9T229.	Without Hot Wire Milli-	\$145⁰⁰
amperemeter.	Price	
9T230.	With Hot Wire Meter	155.00

KILO-AMP COIL NO. 2

9T222.

**Let Us
Save You
\$100.00
on a
Portable
X-Ray
Coil**



A PORTABLE X-RAY COIL equipped with a 2½ K. W. core transformer which develops a current of sufficient volume to take a picture of the pelvis of a 160-pound patient in 18 to 20 seconds, takes a lung picture in 15 to 20 seconds and does fracture work that will make you a reputation—saves lawsuits.

EXCLUSIVE AND UNIQUE FEATURES

THE ONLY PORTABLE COIL WITH A SWITCH-BOARD.

Every control at one end of the coil. No detachable regulator handles to get lost. The most powerful portable coil ever manufactured; it consumes 22½ amperes and will take a hip picture in 20 seconds; it is provided with such a flexible control that in an instant it may be converted to a treatment outfit, giving a fine, soft current suitable for treating the most sensitive membranes.

WRITE FOR COMPLETE DESCRIPTION

Price is a second consideration when the utility and a positive assurance of being able to duplicate successful radiographs is taken into consideration.

Always give Current and Voltage when ordering Electrical Apparatus

ABSOLUTE REGULATION OF D'ARSONVAL VOLTAGE AND AMPERAGE.

From 100 to 2,000 milliamperes at from 2,000 to 25,000 volts.

SAFETY, REMOVABLE, "WATER COOLED" SPARK GAP.

This revolutionary innovation increases the efficiency of the outfit 50 per cent under long continued runs, a feature that enables this, like all other Kilo-Amps Coils, to run indefinitely under full load output.

KILO-AMP No. 4 TREATMENT AND X-RAY CABINET

A Scientific combination of modalities offered in a compact, attractive cabinet and including X-Ray, High Frequency, Sinu-soidal, D'Arsonval, Thermo-Faradic, and Cautery currents.

Kilo-Amp No. 4 is a compact, scientifically constructed outfit delivering the following currents:

SINUSOIDAL, in any strength desired.

THERMO-FARADIC: Indispensable in conditions where a stimulating thermic effect is desired.

D'ARSONVAL: The D'Arsonval unit is especially constructed to meet the demands of the doctor who wants to give this current in massive doses, ranging from 800 to 2,500 milliamperes.

HIGH FREQUENCY: A true High Frequency offering the operator a fine soft current of several hundred oscillations per second. It is under such perfect control that a case of sciatic rheumatism, or the most sensitive membrane may be treated with equal ease.

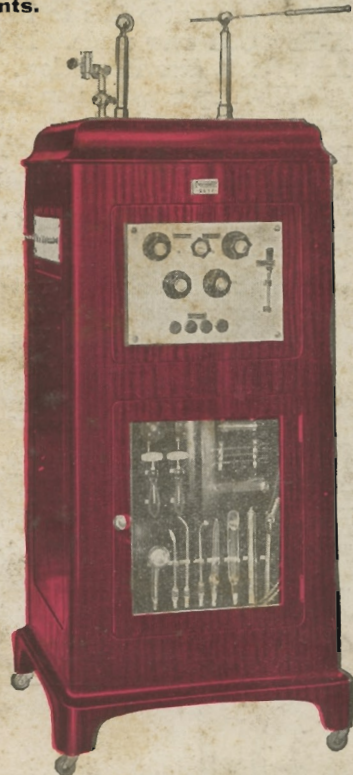
X-Ray: Kilo-Amp No. 4 is the only complete treatment outfit that has incorporated within it a heavy X-Ray Apparatus. For many years there has been a demand for such an outfit, but it has been claimed that such a combination is impossible. However, we put the problem up to our Engineering Department with the result that we are now able to offer the profession in our Kilo-Amp No 4 a complete outfit with an X-Ray section that will radiograph any part of the body in less than 20 seconds without a screen.

It also delivers the following currents in any desired quantity: Sinusoidal, Cautery, Diagnostic Lamp, High Frequency, etc. This apparatus is mounted in an attractive mahogany cabinet 24 inches long, 24 inches wide and 54 inches high. It is the most beautiful and impressive piece of office furniture we have ever seen.

9T185. Complete with a full set of Electrodes, Cords, Handles, Cautery Knives, etc., as shown in cut.

Write for Complete Description.

\$350⁰⁰



EFFICIENCY IN OFFICE APPARATUS

To combine in one cabinet as many Electro-Therapeutic modes as possible, without reducing the efficiency of the apparatus, has been our aim in offering the Kilo-Amp Outfit No. 4 and the Omega Cabinet. Not only does this mean greater economy in floor space, but in the price of the outfit and convenience in treatment. Full detailed description of either of these outfits furnished if desired.

OMEGA ELECTRIC CABINET

A new outfit which has already proved its merit in many physicians' offices



The Omega is our most comprehensive treatment outfit. It is mounted in a beautiful quartered oak cabinet, with white marble switchboards, nickeled fittings, making it an ornament to any office. It delivers more treatment modes than any other outfit manufactured. Over 14 different currents and combinations are at the command of the operator: High Frequency, Morton Wave, Phosphoric, D'Arsonval, Auto-induction, Thermo-Faradic, Sinusoidal, Primary Faradic, Secondary Faradic, Combined Faradic, Cautery and Diagnostic Lamp, etc. In addition to this is the Tankless Air Compressor, delivering Pressure, Vacuum, Pulsation, Massage, besides being suitable for Nebulization, etc.

A special provision has been made for X-Ray work, enabling the operator to radiograph any part of the body in less than 100 seconds.

If you are interested in a treatment outfit that occupies the minimum floor space combining from compactness with almost universal utility and power, you will do well to purchase the Omega.

We are able to offer you this masterpiece of electrical engineering, complete with a large number of accessories, for the ridiculously low price quoted below.

A clear saving of \$100.00 on prices asked by other manufacturers.

9T180. Omega Complete with Accessories

\$265⁰⁰

Price.....
Let Us Send You Our Special Circular on the Omega Cabinet.